CLAIMS:

1. A method of making an electronic device in which a conductive electrode has been formed over a substrate, comprising:

a) using a liquid to clean the conductive electrode;

b) heating in a processing station the conductive electrode to a temperature which dries the conductive electrode and thereby removes residual cleaning liquid applied during the cleaning step;

c) providing an oxidizing plasma in the processing station to modify the properties of the conductive electrode;

d) producing a fluorocarbon plasma in the processing station to form a fluorocarbon layer over the modified conductive electrode; and

e) further processing the structure to produce the electronic device.

2. The method according to claim 1 wherein the conductive electrode has an electrical resistivity greater than 0 ohm-cm and less than 10^7 ohm-cm.

3. The method according to claim 1 wherein the conductive electrode is a transparent conducting oxide.

4. The method according to claim 1 wherein steps a)-d) are performed at pressures of 0.1 Bar or higher.

5. A method of making an OLED device in which ITO electrodes have been formed on a substrate, comprising:

a) using a liquid to clean the ITO electrodes and substrate;

b) heating in an atmospheric pressure processing station the ITO electrodes and substrate to a temperature which dries the ITO electrodes and substrate and thereby removes residual liquid applied during the cleaning step;

c) providing an oxidizing plasma in the atmospheric pressure processing station to modify the properties of the ITO electrodes;

d) producing a fluorocarbon plasma in the atmospheric pressure processing station to form a fluorocarbon layer over the modified ITO electrodes; and

e) further processing the structure to form the OLED device.

6. The method according to claim 5 wherein the oxidizing plasma is an oxygen-containing plasma which modifies the work function of the ITO electrodes.

7. A method of making an OLED device in which ITO electrodes have been formed on a substrate, the improvement comprising:

a) using a liquid to clean the ITO electrodes and substrate;

b) heating in a chamber in an atmospheric pressure processing station the ITO electrodes and substrate to a temperature which dries the ITO electrodes and substrate and thereby removes residual liquid applied during cleaning step and purge the chamber;

c) providing an oxygen-containing plasma in the atmospheric pressure processing station to modify the work function of the ITO electrodes and purge the chamber;

d) producing a fluorocarbon plasma in the atmospheric pressure processing station to form a fluorocarbon layer over the modified ITO electrodes; and

e) removing the substrate and ITO electrodes having the fluorocarbon layer from the chamber for further processing to form the OLED device.

8. The method according to claim 7 further including using shaped and appropriately positioned plasma producing electrodes to produce an oxygen-containing plasma in the atmospheric pressure processing station and using the shaped electrodes to produce a spatially modulated fluorocarbon plasma

in the chamber, which forms a fluorocarbon layer in selected areas of the substrate electrode structure including over the substrate electrode structure.

9. The method according to claim 7 further including using shaped and appropriately positioned plasma producing electrodes to produce an oxygen-containing plasma in the atmospheric pressure processing station and using the shaped electrodes to produce a spatially modulated fluorocarbon plasma in the chamber, which forms a fluorocarbon layer in selected areas of the substrate electrode structure including over the modified ITO electrodes.

10. The method according to claim 1 wherein the fluorocarbon layer is selectively deposited on the conductive electrode.

11. The method according to claim 9 further including the step of performing a post-deposition etch to remove fluorocarbon residue from areas where its presence is undesirable.

12. An OLED device made in accordance with the method according to claim 1.